AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 - 35. (Canceled)

36. (Currently Amended) A transgenic mouse, wherein an endogenous IgH locus comprises replacement of its switch sequence Sμ with a transgene ~~comprising~~ consisting of a human class A immunoglobulin heavy chain constant region gene Cα or a segment of said Cα gene comprising at least an exon encoding the CH3 domain and a membrane exon, wherein said transgenic mouse produces chimeric immunoglobulins A whose heavy chains comprise a mouse variable region and a human constant region or a segment thereof comprising at least the CH3 domain, and wherein said transgenic mouse produces no immunoglobulins M.

37. (Previously Presented) The transgenic mouse of claim 36, which is homozygous for said modified IgH locus.

38. (Currently Amended) The transgenic mouse of claim 36, wherein said transgene ~~comprises~~ consists of the entire Cα gene.

39. (Currently Amended) The transgenic mouse of claim 36, wherein said transgene ~~comprises~~ consists of the segment of the Cα gene comprising the exon encoding the CH3 domain and the membrane exon.

40. (Previously Presented) The transgenic mouse of claim 36, wherein said Cα gene is the Cα1 gene.

41. (Previously Presented) The transgenic mouse of claim 36, which further comprises another transgene encoding a human immunoglobulin light chain.

42. (Previously Presented) The transgenic mouse of claim 41, wherein said light chain is a kappa light chain.

43. (Currently Amended) The transgenic mouse of claim 41, wherein said ~~ztransgene~~ transgene which encodes a human immunoglobulin kappa light chain, further comprises the intronic activator Eμ upstream of a DNA sequence encoding said human immunoglobulin kappa light chain and the palindrome *hs3a/hs1,2/hs3b* downstream of said DNA sequence.

44. (Previously Presented) The transgenic mouse of claim 43, wherein said transgene is under the control of the promoter of the human immunoglobulin heavy chain.

45. (Previously Presented) The transgenic mouse of claim 41, which is dizygous for said transgene.

46. (Previously Presented) The transgenic mouse of claim 41, further comprising an inactivated endogenous immunoglobulin kappa light chain locus.

47. (Previously Presented) The transgenic mouse of claim 46, which is homozygous for said inactivated endogenous immunoglobulin kappa light chain locus.

48. (Previously Presented) The transgenic mouse of claim 36, further comprising an inactivated endogenous J chain gene.

49. (Previously Presented) The transgenic mouse of claim 48, which is homozygous for said inactivated endogenous J chain gene.

50. (Previously Presented) The transgenic mouse of claim 48, which further comprises another transgene encoding a human immunoglobulin J chain gene.

51. (Canceled)

52. (Previously Presented) The transgenic mouse of claim 36, wherein said:

a) endogenous mouse IgH locus comprises the replacement of its switch sequence Sμ with the entire human class A immunoglobulin heavy chain constant region gene Cα1, and

b) which transgenic mouse further comprises a human kappa light chain transgene comprising a VκI gene rearranged with a Jκ5 gene, a Jκ-Cκ intron and a Cκ gene, under the transcriptional

control of the human heavy chain promoter (pVH), the intronic activator Eμ upstream of said promoter of and the palindrome *hs3a/hs1,2/hs3b* downstream of said Cκ gene.

53. (Previously Presented) A homologous recombination targeting vector, which comprises a human class A immunoglobulin heavy chain constant region gene Cα or a segment of said Cα gene comprising at least an exon encoding the CH3 domain and a membrane exon, flanked by fragments of sequences of the mouse IgH locus which are adjacent to its switch sequence Sμ.

54. (Previously Presented) The targeting vector of claim 53, which comprises a cassette for expressing a selection marker, adjacent to said Cα gene or to a segment of said gene.

55. (Previously Presented) The targeting vector of claim 54, wherein said expression cassette is flanked by site-specific recombination sequences.

56. (Currently Amended) The targeting vector of claim 55 wherein said sequences are LoxP sequences of Cre recombinase.

57. (Canceled)

58. (Previously Presented) The targeting vector of claim 53, wherein said fragments of sequences consist of the sequences SEQ ID NO: 7 and SEQ ID NO: 8, corresponding respectively to positions 131281 to 136441 and 140101 to 145032 in the sequence of murine chromosome 12 (accession number AC073553 in the EMBL/GenBank database)

59. (Previously Presented) A mouse embryonic cell, which is modified with the targeting vector of claim 53.

60. (Withdrawn) A method for preparing humanized class IgA antibodies or fragments thereof, which comprises at least the following steps:

a) immunizing a non-human transgenic mammal of claim 36, and
b) producing humanized class IgA antibodies or fragments of the antibodies from serum secretions or B lymphocytes of said non-human transgenic mammal sacrificed beforehand.

61. (Withdrawn) The method of claim 60, wherein the non-human transgenic mammal is a transgenic mouse.

62. (Withdrawn) A humanized class IgA antibody produced by the method of claim 60, which comprises a chimeric heavy chain in which the constant domains are of human origin and a human light chain in which the variable domain is encoded by VκI-Jκ5.

63. (Withdrawn) A fragment of a humanized class IgA antibody of claim 62, which comprises a fragment of said heavy and light chains.

64.(Withdrawn) The humanized class IgA fragment of claim 63, which is secreted from the group consisting of the Fab, Fab'2 and Fc fragments.

65. (Withdrawn) A medicament, which comprises a humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63.

66. (Withdrawn) A diagnostic reagent, which comprises a humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63.

67. (Withdrawn) An immunogenic or vaccine composition, which comprises at least one humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63, combined with an antigen.

68. (Withdrawn) A pharmaceutical composition, which comprises combining at least one humanized class IgA antibody of claim 62, or a fragments thereof of claim 63, with an active ingredient.

69. (Withdrawn) A method of preparing a reagent, which comprises combining at least one humanized class IgA antibody of claim 62, or a fragment thereof of claim 63, with an active ingredient.

70. (Withdrawn) A method of treating infectious diseases or cancer, which comprises administering at least one humanized class IgA antibody of claim 62, or a fragment thereof of claim 63, to a mammal in need thereof.

71. (Withdrawn) The method of claim 70, wherein the mammal is a human.

72. (Withdrawn) The method of claim 70, for treating infectious diseases.

73. (Withdrawn) The method of claim 70, for treating cancer.